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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/773,676

02/06/2004

Mark D. Kotyuk

1416 US

7535

25105

7590

04/17/2009

Vesuvius Crucible Company  
250 Park West Drive  
Pittsburgh, PA 15275

EXAMINER

KASTLER, SCOTT R

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

04/17/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |  |  |
|------------------------------|--------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/773,676 | <b>Applicant(s)</b><br>KOTYUK, MARK D. |  |
|                              | <b>Examiner</b><br>Scott Kastler     | <b>Art Unit</b><br>1793                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/19/2009 has been entered.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kloth et al in view of Soofi et al. Kloth et al teaches an apparatus for lining a tundish (a metallurgical vessel) employing an adjustable structure with an adjustable frame structure (26 and 27 for example) which enable connected panels (25, 26) to adjust their relative positions and which overlap, thereby showing all aspects of the above claims except the provision that struts and braces be employed to produce the adjustable structure in the manner recited in the above claims, although Kloth et al does not restrict its disclosure to any type of adjusting structure. Soofi et al teaches a

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frame for a lining apparatus for lining a tundish which includes a plurality of struts and a plurality of braces which are adjustable through the use of an adjustable connector including pins allowing for adjustability of both the struts and braces (see the embodiment of figure 4 for example), where the adjustability provided by this arrangement allows for the use of the same frame for the lining of many different sizes of vessels thereby increasing the usefulness of the lining apparatus (see col. 2 lines 10-20 for example). Because improved usefulness would also be desirable in the lining apparatus shown by LaBate et al, motivation to construct the frame of LaBate et al through the use of adjustable struts and braces in the manner shown by Soofi et al, in order to allow the apparatus to be used and re-used to line different sizes and shapes of vessels, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips et al in view of Soofi et al. Phillips et al teaches an adjustable form apparatus for the formation of refractory linings in a metallurgical vessel including a system of adjustable struts and braces for allowing the relative movement of panels (160, 162) when lining metallurgical vessels showing all aspects of the above claims except the use of the particularly recited strut and brace structure. Soofi et al teaches a frame for a lining apparatus for lining a tundish which includes a plurality of struts and a plurality of braces which are adjustable through the use of an adjustable connector including pins allowing for adjustability of both the struts and braces (see the embodiment of figure 4 for example), where the adjustability provided by this arrangement allows for the use of the same frame for the lining of many different sizes of vessels thereby increasing the usefulness

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of the lining apparatus (see col. 2 lines 10-20 for example). Because improved usefulness would also be desirable in the lining apparatus shown by Phillips et al, motivation to construct the frame of Phillips et al through the use of adjustable struts and braces in the manner shown by Soofi et al, in order to allow the apparatus to be used and re-used to line different sizes and shapes of vessels, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

### ***Response to Arguments***

Applicant's arguments, see the response and affidavit under Rule 1.132, filed 3/19/2009, with respect to the rejection(s) of claim(s) 1-20 under 35 USC 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly applied references to Phillips et al and Kloth et al, which teach rigid plates designed for adjustability when disposed within a metallurgical vessel to be lined.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Kastler whose telephone number is (571) 272-1243. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Scott Kastler/  
Primary Examiner, Art Unit 1793

sk